

Relative risk (RR) of BC mortality with MM used to estimate LE with BC in screened women was synthesized by quality-weighted random effects meta-analysis. The model was designed specifically to incorporate disease-specific mortality into assessment of a general population being screened. Probabilities of each endpoint in a five-year cycle were generated from lifetables and epidemiological sources. Utility-adjustments used BC stage- and duration-specific published values. Sensitivity analyses: to parameters, assumptions, data sources, synthesis methods, and different screening programs. **RESULTS:** Base-Case Analysis: In the USA, mammography is most cost-effective at age 60 (ICER: \$38,876/QALY), being slightly less so at age 40 (ICER: \$47,991/QALY). The ICER increases steadily after age 65, to reach its highest estimation at age 80 (\$74,665/QALY). Sensitivity analyses demonstrated relative robustness to epidemiological variables, mammography performance, health utility, costs and model assumptions and sensitivity to discount rate. The model was very sensitive to the RR of BC mortality with MM. **CONCLUSION:** The most cost-effective program was to start annual mammography at age 40, switching to 2-year intervals at 50, and stopping at age 70. This model can be adapted for use in other countries with the relevant data inputs.

PIH14

DESCRIBING YOUR HEALTH TODAY: ANALYSIS OF OPEN ANSWERS IN THE VALIDATION PROCEDURE OF THE ITALIAN EQ-5D (CHILD) VERSION

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OBJECTIVES: To describe children's views about their Quality of Life (QoL) by means of open-answers, as a part of the validation procedure of the Italian version of EQ-5D(child), within the EuroQoL child-task-force. **METHODS:** In total, 415 valid children/adolescents sampled from general population (aged 8–15) self-completed a set of instruments/questions including EQ-5D(child), and were asked: a) to explain why they reported having some/a lot of difficulties at each EQ-5D profile domain (if they had), and b) if not, to imagine why youths aged like them might report having difficulties. Textual corpus resulting from open answers was submitted to multiple correspondence analysis (MCA), to show relationships of proximity/distance between the semantic fields associated with each domain. **RESULTS:** The first factor extracted by MCA (inertia explained: 38.17%) discriminates between words related to the domain 5 (Feeling Worried, Sad or Unhappy: school troubles, relationships with friends, illness/death of close relatives) vs. words related to domain 1 (Mobility: physical impairments, fractures, sprains). The second and the third factors (inertia: 28.83% and 19.89%) discriminate between causes of difficulties at domain 2 (Taking care of myself: mental or physical disabilities) vs. domain 4 (Having pain or discomfort: head-ache, stomach-ache, accident). The last factor illustrates difficulties related to domain 3 (Doing usual activities: tiredness because of sports training, excess of daily commitments, lack of willingness). **CONCLUSION:** Results show that the current version of EQ-5D(child) profile captures a variety of semantic fields related to children's well-being, discriminating in particular between social/relational vs. physical aspects of QoL. Analysis of open-answers in the validation project for EQ-5D(child) is allowing the EuroQoL child-task-force to optimize validity and reliability of this instrument for the assessment of QoL in paediatric population.

ADJUSTING FOR TRIAL QUALITY IN A META-ANALYSIS

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OBJECTIVES: Meta-analysis of the effect of mammography on breast cancer (BC) mortality, using random effects (RE) inverse-variance weighted techniques, accounting for heterogeneity by incorporating a quality weight into the analysis. **METHODS:** Raw data were extracted from the most relevant publications of eight RCTs of mammography screening identified through a systematic review. Quality-weighted random effects meta-analysis (QWREMA) estimated the pooled relative risk (RR) of BC mortality in screened vs. control groups, in women under 50, over 50, and of all ages by empirically weighting the between-study variance with a quality score assigned to each trial derived through qualitative review of its supportive literature. The mammography-specific quality rating system contained both scale elements and a component approach. Results were compared to those from fixed effects (FE) and RE methods. Sensitivity analysis assessed the impact of inclusion criteria on the results and cumulative analysis assessed the effect of decreasing order of quality. **RESULTS:** A significant 20% reduction in BC mortality was observed in women of any age [RR: 0.80(95%CI = 0.72–0.87)], and 22% reduction in women over 50 [RR: 0.78(95%CI = 0.70–0.88)]. Lack of between-study variability in women under 50 reduced the result to a FE analysis: 0.84(95%CI = 0.73–0.97). Results were robust to different weights on algorithm quality domains. QWREMA tightened the RE 95%CI by 10% in the >50 group, and by almost 12% in women of all ages. No specific trend of effect with study quality was observed in women of all ages and women >50. In women <50, 7 studies had to be pooled before a statistically significant beneficial effect was observed. **CONCLUSION:** Quality scores may be used in a meta-analysis to account for between-study variance due to heterogeneity. The efficacy of mammography in the 40–49 age-group remains in question, and may depend on the number and/or quality of studies included in the meta-analysis.

PIH16

INTERNET SURVEY: A NEW AND VALID TOOL TO ESTIMATE THE BURDEN OF OTITIS IN CHILDREN <5 YEARS OLD

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OBJECTIVES: Evaluate internet-surveys as a tool to estimate the full burden of otitis. **METHODS:** An internet-survey was conducted February 2007 in The Netherlands (NL) and Belgium (B). Parents of children (<5years) were e-mailed a 17-question-survey about their child's most recent illness-episode (<1year ago). Data were analyzed for otitis (parent report of diagnosis by medical doctor), and prevalence compared with published figures to assess the validity of internet-survey methodology. **RESULTS:** A total of 3633 child-illness episodes were analyzed, 2425 from NL and 1208 from B. In NL, 47% parents sought medical-help, a general-practitioner (GP) in 89% of cases; in B 77% sought help, a GP in 76% of cases. Of these episodes 16% were diagnosed with otitis in NL, 14.9% by GPs, comparing well with 16.2% from the Dutch LINH GP-database. In B, 15% of the cases were diagnosed as otitis, 11.6% by GPs, comparing well with 13.6% from the Intego Belgian GP-database. Additionally 10–14% of cases had symptoms consistent with otitis but were diagnosed with another upper respiratory tract infection, additionally 3.6%

(NL) and 7.1% (B) of child-illness episodes had symptoms consistent with otitis but no medical help was sought. Other parameters (referrals, use of medical resources) were in line with what could be found in GP-databases. **CONCLUSION:** Most children will experience ≥ 1 otitis episode by 3 years. However, the full burden is difficult to assess as many patients are not seen by clinicians, or one of several professionals may be consulted. The internet-survey estimated the burden of otitis at the GP level in NL and B consistent with published information. However, it captured cases that may not be identified from GP-databases because of the recording of confounding diagnoses plus cases where medical help was not sought, demonstrating that the burden of otitis is higher than can be estimated from GP-databases.

PIH17



INDIVIDUAL'S HEALTH—Patient Reported Outcomes

VALIDITY OF A CHILD-FRIENDLY EQ-5D AS A GENERIC HEALTH OUTCOME INSTRUMENT IN CHILDREN AND ADOLESCENTS WITH CYSTIC FIBROSIS IN GERMANY

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OBJECTIVES: To evaluate the validity of the child-friendly EQ-5D as a generic health outcome instrument in children and

adolescents with cystic fibrosis (CF) in Germany. **METHODS:** A multicentre study was conducted in four CF centres in Germany in 2006. Quality of life data from 96 patients between eight and seventeen years was collected using the child-friendly EQ-5D as a generic outcome instrument and the Cystic Fibrosis Questionnaire (CFQ) as a disease-specific instrument. Results of both instruments were compared by statistical analyses using Spearman's rank correlations. **RESULTS:** A total of 44.6% of the patients stated that they have no problems in any of the EQ-5D dimensions. Several low to high correlations between separate dimensions and the visual analogue scale of the child-friendly EQ-5D and the different scales of the CFQ for children, their parents and adolescents were observed. Looking at the five EQ-5D dimensions the highest correlation ($r = 0.638$, $p = 0.01$) was found between the dimension 'happiness/worry/sadness' and the CFQ scale 'emotional state' in adolescent patients. The overall highest correlation was found between the 'subjective health perception' and the visual analogue scale ($r = 0.753$, $p = 0.01$) in adolescent patients over 13 years. Aside, additional correlations between sociodemographic and quality of life data were reported. It is noticeable that in many cases patients reported 'good' EQ-5D health states despite an at least fairly high disease activity according to the physicians' classification. An explanation might be coping. CF is a congenital condition and patients learn to live with the disease hence, not perceiving limitations as bad as expected. **CONCLUSION:** Overall, the child-friendly EQ-5D can be considered a valid generic health outcome instrument which reflects changes in health of children and adolescents according to the progression of this life long chronic disease cystic fibrosis.

PIH19

TEMPORAL PATTERNS IN HEALTH RELATED QUALITY OF LIFE IN HOSPITALIZED PATIENTS IN THE UNITED KINGDOM

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OBJECTIVES: Health related quality of life (HR-QoL) is studied in clinical trials to measure efficacy at the level of individual patients; at the population level HR-QoL reflects health system performance. The purpose of the study was to examine temporal variation in HR-QoL in light of potential bias in study outcomes, and to inform health policy guided by return on recent investment in the UK National Health Service (NHS). **METHODS:** A total of 23,356 hospitalisations in HODaR, a prospective patient database at Cardiff and Vale NHS Trust, were analysed for self-reported EQ-5D scores recorded routinely post-discharge during the 2002–2006 period. **RESULTS:** The mean annual EQ-5D for hospitalized population remained stable during the observation period for the general population and in subgroup analysis. In contrast, when records from all years were grouped in categories corresponding to months of survey, differences were significant ($p < 0.001$); the lowest score was observed in May 0.622 [95%CI: 0.609–0.635] and the highest in July 0.674 [0.661–0.687]. When adjusted for age, sex, BMI, exercise, smoking and Charlson comorbidity index, the highest positive monthly effect on HR-QoL was reported in July (0.032, $p < 0.001$) and negative in February (-0.028 , $p = 0.003$) and April (-0.019 , $p = 0.0015$). For robustness, month effect on all EQ-5D domains was analysed. As expected, in July item scores decreased (increasing HR-QoL) significantly for all the domains. In December and April item scores were higher, but the effect was not significant. EQ-5D scores were highly heterogeneous within individual Health Related Groups and did not reproduce the temporal pattern of the general population. **CONCLUSION:** Asynchronous measurements of quality of life for different treat-

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